Proposal #2001-	406-206	(Office Use Only)
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PSP	Cover She	<b>et</b> (Attach to the front of each	ch propo	osal)		
Propo	sal Title:	Narrows 2 Hydro Power Plant Flow Bypass System Design				
Appli	cant Name:	Yuba County Water Agency				
	ct Name:	Curt Aikens				
Mailiı	ng Address:	1402 D Street, Marysville	e, CA 9:	5901		
Telep	hone:					
Fax:						
Email	:					
Some	entities charg list below.	g requested \$ _299,606_ e different costs dependent	on the so	ource of the funds. If it is different for state or federal		
Cost	ah a ua mautu ay	9		Vog V No		
	share partner		oh X	Yes X No Yuba County Water Agency has funded preliminary		
	ny parmers an n - \$109,568	•				
desig	II * \$109,30 <u>6</u>					
Inclu	de the Topic f	or which you are applying (	check of	nly one box).		
	Natural Flow	Regimes		Beyond the Riparian Corridor		
	Nonnative Inv	asive Species		Local Watershed Stewardship		
	Channel Dyna	amics/Sediment Transport		Environmental Education		
	Flood Manag	ement		Special Status Species Surveys and Studies		
	Shallow Water	er Tidal/Marsh Habitat		Fishery Monitoring, Assessment and Research		
	Contaminants	3		Fish Screens		
What	t county or co	unties is the project located	in?	Yuba		
				ee attached list and indicate number. Be as specific as		
possi	ible No. 8	Feather River and Sutter Ba	ısin—			
Indic	cate the type o	f applicant (check only one	box):			
	State agency	y		Federal agency		
	Public/Non-	-profit joint venture		Non-profit		
	Local gover	nment/district		Tribes		
	University			Private party		
	Other:		_			

Indic	cate the primary species which the propos	sal ad	dresses (check all that apply):
	San Joaquin and East-side Delta tributarie	es fall-	run chinook salmon
	Winter-run chinook salmon		Spring-run chinook salmon
	Late-fall run chinook salmon		Fall-run chinook salmon
	Delta smelt		Longfin smelt
	Splittail		Steelhead trout
	Green sturgeon		Striped bass
	White sturgeon	O	All chinook species
	Waterfowl and Shorebirds		All anadromous salmonids
	Migratory birds		American shad
	Other listed TIE species:		
India	cate the type of project (check only one b	voz).	
	Research/Monitoring		Watershed Planning
_	Pilot/Demo Project	0	Education
	Full-scale Implementation		Education
	run-scale implementation		
Is this	s a next-phase of an ongoing project?	Yes	Nox_
	e you received funding from CALFED before?		XNo
	,		
If yes	s, list project title and CALFED numberLife	histo	ry and stock composition of steelhead trout in the lower
•			er (98-NO3)
Have	average of the diagrams CV/DIA before 2	Vaa	. V No
паче	e you received funding from CVPIA before?	168	6 NO
If ves	s, list CVPIA program providing funding, project	t title ar	nd CVPIA number (if applicable):
-	Agreement 11332-9-GO23	t titlo ai	a ovi avridinisor (ii applicasio).
1 110	TIGIOTION TICCE O COLO		
By s	igning below, the applicant declares the foll	_	
•	The trainances of an representation in the		
		Sudmi	it the application on behalf of the applicant (if the applicant is an
	entity or organization); and The person submitting the application has re-	raad ar	nd understood the conflict of interest and confidentiality
			ny and all rights to privacy and confidentiality of the proposal on
	behalf of the applicant, to the extent as pro		
Curt	Aikens, Assistant Administrator		
	ted name of the applicant	_	
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Sign	nature of the applicant	_	
_	• •		

## **B. EXECUTIVE SUMMARY**

Project Title: NARROWS 2 HYROELECTRIC POWERPLANT FLOW BYPASS DESIGN

**Amount Requested:** \$299.606

**Applicant Name:** Yuba County Water Agency

**Primary Contact:** Curt Aikens, Assistant Administrator, Yuba County Water Agency, 1402 **D** Street, Marysville, CA 95901, Telephone: 5301741-6278, Fax: 530/741-6541, E-mail: caikens@ycwa.com

## **Participants and Collaborators:**

Project Summary: Yuba County Water Agency (YCWA) is requesting funding for final engineering design work for a proposed flow bypass system for the Narrows 2 hydroelectric powerplant. The Narrows 2 powerplant is located in Yuba County on the Yuba River just downstream of Englebright Dam, approximately 24 miles upstream of the confluence of the Feather and Yuba rivers. The Yuba River supports significant, naturally-spawning populations of anadromous fish, including federally and state-listed Central Valley fall-/late fall-run chinook salmon, spring-run chinook salmon, and steelhead trout. Under existing conditions, anadromous fish in the lower Yuba River can be adversely affected by normal maintenance, emergency operations, and catastrophic failure of the Narrows 2 powerplant or Pacific Gas & Electric transmission system. Potential impacts include stranding of juveniles, dewatering of redds, and thermal stress caused by increased river temperatures. To address these problems, YCWA authorized and funded a preliminary design study for supplementing the flow bypass facilities at the Narrows 2 powerplant. The objective of the design was to provide a means of maintaining uninterrupted releases from the Narrows 2 powerplant during temporary or sustained transmission or plant malfunctions for flows up to 3,000 cfs, and, thus, eliminate or substantially reduce flow fluctuations and associated biological impacts caused by scheduled and unscheduled outages of the Narrows 2 powerplant. The existing preliminary design study will serve as the basis for the final design work

The proposed project is based on the hypothesis that the new flow bypass system will effectively eliminate or substantially reduce mortality of eggs, alevins, and juvenile salmonids that could otherwise occur in the absence of the project. This hypothesis is supported by a large body of scientific evidence for the effects of flow fluctuations and elevated water temperatures on salmonids.

The proposed project will directly address Strategic Goal 1 (achieve recovery of "at-risk species") and Goal 4 (protect or restore functional habitat types) of the CALFED ERP, and support and maximize the effectiveness of ongoing and future ecosystem restoration actions in the lower Yuba River, Feather River, Sacramento River, Delta, and Suisun and San Francisco Bays. The proposed project is also consistent with CVPIA goals by providing direct benefits to species and habitats determined to have the highest biological priority at this time (spring-run chinook salmon and steelhead) and which will contribute most to achieving the anadromous fish restoration goals.

## C. PROJECT DESCRIPTION

### 1. Statement of the Problem

#### a. Problem

Anadromous fish in the lower Yuba River can be adversely affected by normal maintenance, emergencyoperations, and catastrophic failure of the Yuba County Water Agency (YCWA) Narrows 2 hydroelectric plant or Pacific Gas & Electric (PG&E) transmission system. Potentially affected species include Central Valley fall/late fall-run chinook salmon, spring-run chinook salmon, and steelhead trout. Potential impacts include stranding of juveniles, dewatering of redds, and thermal stress caused by increased river temperatures.

The Lower Yuba River supports a significant portion of the natural production of anadromous fish in the Central Valley. The lower Yuba River consists of the 24-mile river reach between Englebright **Dem** and the confluence of the Yuba and Feather rivers at Marysville. This reach provides habitat for naturally spawning populations of Central Valley fall-run chinook salmon, spring-run chinook salmon, and steelhead trout. Central Valley spring-run chinook salmon are currently listed as threatened under the federal and state Endangered Species Acts (ESAs), and steelhead are listed as a candidate for listing under the federal ESA. Central Valley fall-/late fall-run chinook salmon are listed as a candidate for listing under the federal ESA. On average, about 15,000 fall-run chinook salmon spawn in this reach each year. Steelhead runs in the lower Yuba River have been estimated at 2,000 fish and spring-run chinook salmon spawning escapement has been estimated at 1,000 fish. The lower Yuba River also supports an important seasonal fishery for American shad, and significant populations of native resident fish species.

Potential flow impacts are a function of the Englebright Dam design and the hydraulic capability of the hydroelectric plants connected to the dam. Englebright Dam is a debris dam completed in 1941 by the Army Corps of Engineers. There is no low level outlet on the dam. The only way to pass water from Englebright Reservoir downstream is to spill water over the top of the dam, or discharge water through the PG&E Narrows 1 or YCWA Narrows 2 hydroelectric plants. Narrows 1 has a maximum generation flow capability of about 650 cubic feet per second (cfs), and a bypass flow (generator not operating) capability of about 650 cfs. Narrows 2 has a maximum generation flow capability of about 3,400 cfs and a bypass capability of about 650 cfs. Both Narrows 1 and Narrows 2 have intakes that take water out of the Englebright Reservoir cold-water pool. Also, Englebright Reservoir is used as the afterbay to the Colgate hydroelectric plant, which means that the reservoir level commonly fluctuates 10 feet or more during a week's time. Narrows 1 and 2 are operated to maintain a relatively constant flow downstream into the lower Yuba.

Potential downstream temperature impacts are a function of the temperature stratification in the reservoir and the relative contributions of flow from the Narrows 1 powerplant, Narrows 2 powerplant, and spill over Englebright Dam. Flow through the powerplants is relatively cool while spill over the top of Englebright dam is relatively warm. During mid-spring through mid-fall, temperatures through the Narrows 1& 2 penstocks are typically about 52 to 55 degrees F. During the same time period Englebright monthly average surface temperatures ranged between 61 and 74 degrees F.

Flow and temperature impacts can be caused by the shutdown of the Narrows 2 generator. These impacts are potentially greater with increasing discharge through the plant. There are three general types of shutdowns, including maintenance, short-term emergency, and long-term emergency shut downs. Maintenance activities include generator brush replacement, which consists of a 6-hour shutdown 2 to 3 times per year and annual maintenance, which is typically a 2 - to 3-week shutdown or longer (months) if major maintenance isperformed. During brush replacement the 650 cfs bypass valve can be opened. During the annual maintenance period, the bypass valve usually cannot be operated, thus, there will be no flow through Narrows 2.

Short-term emergency outages typically result from a momentary PG&E transmission line fault outages (caused by birds, trees, lightning, storms), lightning strikes, or plant malfunction. Depending on the type of outage the plant flow will be reduced to somewhere between 0 and 650 cfs for a about a minute to 1+ hours. The frequency of theses types of outages has ranged from 0 to multiple outages in a year with an annual average of about 2 per year. Corrective actions have been taken by both YCWA and PG&E to minimize future outages of this type. The amount of downstream flow impact depends on pre-outage flow conditions and the type of outage, and could result in a maximum flow reduction of 3,400 cfs.

A long-term outage would result from a catastrophic failure of the PG&E transmission system linking the plant to the transmission grid, or major component failure at the plant. Depending on the failure type there could be no flow through the plant or 650 cfs if the bypass can be operated. These are very rare but could last from days to months. Historically, there have been 2 of these outages in the last 30 years. Again, the amount of downstream flow impact depends on pre-outage flow conditions and the type and duration of the outage. Full downstream flow can be resumed with spill over the top of Englebright Reservoir. Depending on the reservoir level and flow conditions, it could take I or 2 days to resume the pre-outage flow. Spilling warm surface water from Englebright Reservoir can substantially increase downstream water temperatures. Sustained downstream temperatures in excess of 65 degrees F can occur from high spills rates during the May through October periods.

Rapid flow changes resulting from uncontrolled hydroelectric operations can be a major stressor on aquatic resources. Long-term flow changes can affect the availability of habitat and other factors that influence production of fish and other aquatic organisms (e.g., water temperature), and rapid, short-term flow changes can be immediately lethal or cause indirect and delayed biological effects. Rapid decreases in river flow or stage rarely occur in unregulated rivers, except during and immediately after floods. Thus, anadromous salmonids and other riverine species are not necessarily adapted to survive such events (Hunter 1992).

To address these problems, YCWA authorized and funded a \$109,569 preliminary design study for modifying the flow bypass facilities at the Narrows 2 powerplant. The objective of the design was to provide a means of maintaining uninterrupted releases from the Narrows 2 powerplant during temporary or sustained transmission or plant malfunctions for flows up to 3,000 cfs, and, thus, eliminate or substantially reduce flow fluctuations and associated biological impacts caused by scheduled and unscheduled outages of the Narrows 2 powerplant. This study included review of all relevant engineering data and information pertaining to the existing project; site visits by the project team to view the existing facilities and discuss plant operations with operations staff; design of the

new bypass system, turbine shutoff valve, and electrical control system; and preparation of a construction plan and schedule, cost estimate, and bypass study report. Future project phases will include final design, environmental compliance documentation, and construction phases. At this time, YCWA is submitting the following proposal application to CALFED and CVPIA to request funding to prepare the final design plans and specifications for the new bypass system.

## b. Conceptual Model

Anadromous fish production is controlled by a number of factors that influence the number of fish that successfully complete their life cycle from egg to spawning adult. These factors operate through a number of density-independent and density-dependent mechanisms to affect or limit the number of individuals that successfully pass from one life stage to the next. Flow changes can influence the survival of early life stages of salmonids depending on the rate, magnitude, and duration of these changes. Flow changes can generally be classified into those that occur over relatively long periods (days, weeks, months) which can affect the availability of habitat and other factors that influence fish production (e.g., water temperature), and those that occur over relatively short periods (minutes, hours) which can be lethal or cause indirect and delayed biological effects (Hunter 1992). Rapid decreases in river flow or stage associated with hydroelectric operations rarely occur in unregulated rivers, except during and immediately after floods. Thus, salmonids and other riverine species are not necessarily adapted to survive such events.

In salmonids, survival from the intergravel life stages (egg and alevin stages) to the free-swimming fry stage is determined by a number of factors, including substrate composition, percentage of fines, gravel permeability, spawner density (i.e., degree of redd superimposition), and changes in flow and water temperature during the incubation period (Bjornn and Reiser 1991). Adult chinook salmon generally select spawning sites that provide suitable environmental conditions for developing eggs and alevins. However, changes in flow following spawning (i.e., during the incubation period) can affect the survival of embryos and alevins to the free-swimming fry stage. For example, if flows increase to levels capable of mobilizing streambed substrates (e.g., flood flows) during the incubation period, redd scouring can kill embryos and alevins through displacement or physical abrasion. Conversely, if flows decline during the incubation period, eggs or alevins may die if the redd is dewatered or flows reach a point where the circulation of water through the redd is insufficient to meet the oxygen and waste disposal needs of the embryos or alevins. Lower flows and reduced circulation of water through the redd may also result in increased water temperatures which may reach lethal levels depending on the season and weather conditions.

The lethal impact of redd dewatering on salmonid eggs and alevins has been well documented (Fraser 1972, Resier and White 1981, Hunter 1992). Studies have shown, however, that salmonid embryos can survive dewatering of redds when dewatering occurred before hatching, temperature were kept within a suitable range, fine sediment concentrations did not impede air flow, and humidity was maintained near 100% in the redds (Bjomn and Reiser 1991). Alevins are more sensitive to redd dewatering than eggs because they rely on gills to respire, but, under certain conditions, may survive redd dewatering if exposure is limited and sufficient subsurface flow is present (Neitzel and Becker 1985, Hunter 1992). In general, sustained redd dewatering can substantially reduce survival of eggs and alevins but impacts can vary depending on site-specific conditions, weather, and duration of exposure.

Juvenile salmonids, especially newly-emerged **fry**, are sensitive to flow fluctuations because of their poor swimming ability and their tendency to settle along the shallow margins of rivers where they are vulnerable to beaching or stranding during flow reductions. Salmonid stranding associated with hydropower operations has been well documented, and stranding associated with natural declines in flow has also been observed (Hunter 1992). Factors that may influence the incidence of juvenile stranding include life history stage, time of year, river channel configuration, substrate type, range of flow change, rate of flow change, species, time of day, and duration of stranding. Although not well understood, flow fluctuations may also have indirect effects on the survival of juvenile salmonids by displacing juveniles from preferred habitats; stimulating emigration; increasing vulnerability of juveniles to predators; and reducing food availability through effects on invertebrate diversity, species composition, and total biomass (Cushman 1985, Brusven and MacPhee 1976).

Water temperatures outside the upper and lower temperature ranges for successful spawning and incubation can reduce the survival of eggs to hatching and emergence. Adult salmonids generally spawn at times that provide suitable temperature conditions for developing eggs and alevins. Therefore, increases or decreases in water temperature during the incubation period can cause substantial mortality if water temperatures exceed suitable ranges for prolonged periods.

## c. Hypotheses

The principal hypothesis related to the proposed project is as follows:

Hypothesis: The proposed project will effectively eliminate or substantially reduce mortality of eggs, alevins, and juvenile salmonids that would otherwise occur in the absence of the project.

This hypothesis is supported by a large body of scientific evidence for the effects of flow fluctuations and elevated water temperatures on salmonids (summarized in Section Cb ,"Conceptual Model").

## d. Adaptive Management

The proposed bypass system would not be subject to adaptive management because the effects of flow fluctuations and related impacts on the early life stages of salmonids have been well documented through field studies and laboratory research. Flow fluctuations downstream of hydroelectric facilities are generally recognized as a major stressor on invertebrate and fish production in regulated rivers, and have been identified as one of the major limiting factors for anadromous fish production in the Central Valley (PSP, Attachment G, Table 3). Reducing and controlling flow fluctuations was identified in the AFRP Draft Restoration Plan as a high priority action in the lower Yuba River to avoid and minimize adverse effects to juvenile salmonids (USFWS 1997). In addition, the proposed bypass will provide continued access to the coldwater pool in Englebright Reservoir during temporary or sustained transmission problems or plant failures, and, thereby, prevent potential water temperature impacts to anadromous fish that could occur in the future if the proposed bypass system is not constructed. In addition, the proposed bypass system will contribute to the utility and effectiveness of the proposed Narrow 2 intake extension which, when installed, will provide long-term temperature benefits to anadromous fish in the lower Yuba River.

## e. Educational Objectives

This section is not applicable to the proposed project.

## 2. Proposed Scope of Work

## a. Project Location

The Narrows 2 Bypass Final Design project will produce plans and specifications to supplement the existing 650 cfs bypass with a 3,000 cfs synchronous bypass to be located next the existing Narrows 2 plant. The Narrows 2 powerplant is in Yuba County on the Yuba river just below Englebright Dam, located approximately 24 miles upstream of the confluence of the Feather and Yuba Rivers (Figure 1). The proposed project is in the Feather River and Sutter Basin Ecological Management Zone of the Bay-Delta Watershed. The property is owned by the United States of America (USA) and YCWA has an existing contract with the USA for use of this land for the Narrows 2 powerplant. A photograph of the Narrows 2 powerplant location is shown in Figure 2.

## b. Approach

The final design work for the flow bypass system will be based on the existing preliminary design study prepared by MK Centennial. The final design will include design criteria, operations criteria, and bid plans and specifications, including all structural, mechanical, electrical, equipment, and materials, and installation specifications.

## c. Monitoring and Assessment Plans

YCWA will continue to fund ongoing fisheries and habitat monitoring in the lower Yuba River to evaluate the effects of current and future operations and facilities on anadromous fish populations, including fall-run chinook salmon, spring-run chinook salmon, steelhead, and American shad. Ongoing fisheries monitoring efforts include annual chinook salmon carcass counts and spawning population estimates, steelhead redd surveys, juvenile chinook salmon and steelhead population surveys, and chinook salmon and steelhead redd dewatering and juvenile stranding surveys. The latter surveys have been conducted by Jones & Stokes biologists in the past to assess the risk of redd dewatering and juvenile stranding before initiating scheduled flow reductions to assist YCWA in managing flows to minimize impacts on chinook salmon, steelhead, and other fish species in the lower Yuba River. Surveys have also been conducted during and after scheduled flow reductions to assess the extent of juvenile stranding, and to conduct rescues of stranded fish, if necessary. These surveys have also been important for determining when early life stages of chinook salmon and steelhead are most sensitive to such flow reductions, and the range of flows resulting in the greatest and least impacts on these life stages.

YCWA will also continue to fund ongoing monitoring of flow and water temperatures at several key locations in the lower Yuba River. These data, along with annual fisheries monitoring results, will continue to be used to evaluate the effects of current and future operations and facilities on habitat conditions for anadromous fish, including the ability of the proposed flow bypass system (if

Figure 1. Location of Proposed Flow Bypass System at Narrows 2 Powerplant, Yuba County

# SMARTVILLE QUADRANGLE CALIFORNIA 7.5 MINUTE SERIES (TOPOGRAPHIC)

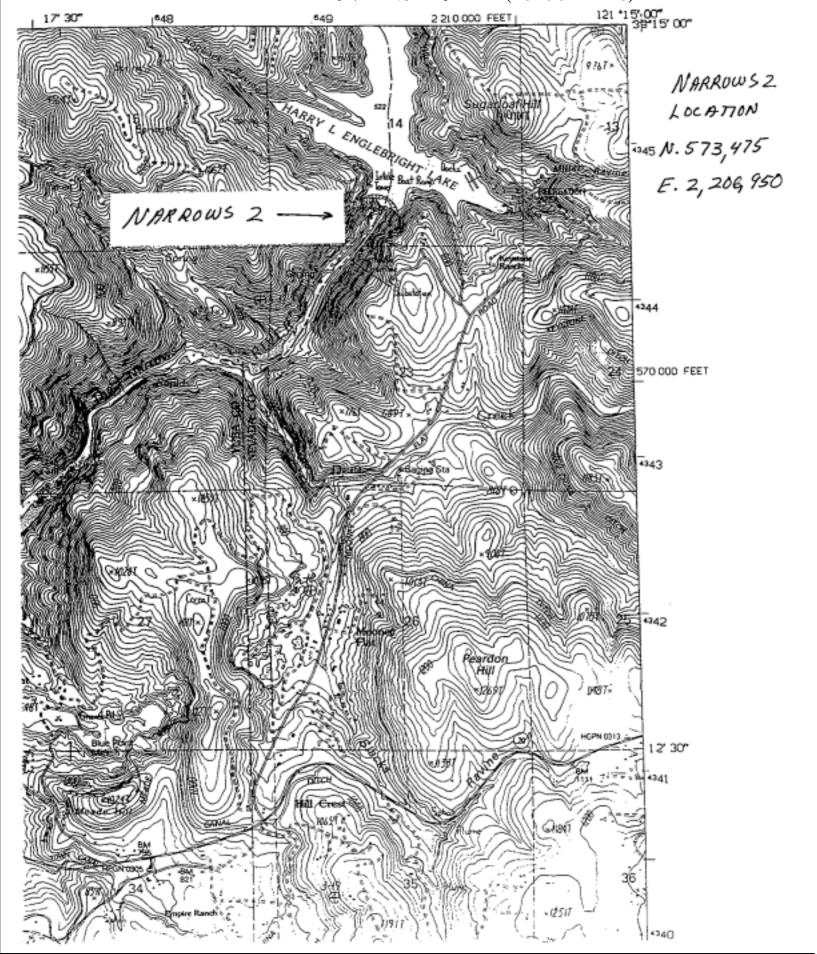


Figure 2. Englebright Dam and Narrows 2 Powerplant

implemented) to maintain flows and water temperatures during scheduled and unscheduled shutdowns of the Narrow 2 powerplant.

## d. Data Handling and Storage

Fisheries monitoring, operations, flow, and temperature databases are maintained and updated regularly by YCWA. These data can be made available to interested parties upon request.

## e. Work Products

**A** final design report and final plans and specifications for the flow bypass system will be prepared and made available to CALFED, CVPIA, and other interested parties following completion of the proposed final design phase.

## f. Work Schedule

Final design work will begin immediately following award of a contract, and will be completed within one year of the award date.

## g. Feasibility

The final design work for the flow bypass system will be based on the existing preliminary design study prepared by MK Centennial. Following award of the contract, no other agreements or permitting requirements are required to complete the final design work.

# ${f D}.$ APPLICABILITY ${f TO}$ CALFED ${f ERP}$ ${f GOALS}$ AND IMPLEMENTATION PLAN AND CVPIA PRIORITIES

## 1. ERP Goals and CVPIA Priorities

The proposed project will directly address the highest-priority Strategic Goal of the CALFED ERP (achieve recovery of "at-risk" species) by addressing the immediate need for protection of "at-risk" species (spring-run chinook salmon and steelhead trout) and contributing to the overall recovery of these species in the Central Valley. In addition, ensuring protection of these and other species from flow fluctuations and related impacts will help to provide flexibility in implementing less certain management and restoration actions, and support and maximize the effectiveness of ongoing and future ecosystem restoration actions in the lower Yuba River, Feather River, Sacramento River, Delta, and Suisun and San Francisco Bays. The proposed project will also address CALFED's Strategic Goal 4 (protect or restore functional habitat types) by protecting habitats from the effects of flow fluctuations and related impacts that may limit the effectiveness of ongoing and future ecosystem restoration actions aimed at restoring functional habitat types.

The proposed project is also consistent with the goals of the CVPIA and the biological "focus areas" that are being used to establish priorities and guide implementation of the AFRP. Specifically, the proposed project will provide direct benefits to species and habitats determined to have the highest biological priority at this time (naturally-spawning populations of spring-run chinook salmon and steelhead) and which will contribute most to achieving the anadromous fish restoration goals. In addition, theproposed project directly addresses **two** stressors (flow fluctuations and modified water temperatures) that have been identified by the USFWS as highly significant limiting factors affecting anadromous fish species in the Central Valley (PSP, Attachment G, Table 3). The USFWS also listed reduction and control of flow fluctuations as a high priority action in the lower Yuba River to avoid and minimize adverse effects to juvenile salmonids (USFWS 1997). This proposal also ranks highbased on the biological, implementation, and economic considerations for specific actions for the CVPIA (PSP, Attachment G, Table 1).

## 2. Relationship to Other Ecosystem Restoration Projects

By ensuring protection of anadromous fish species (including "at-risk species") from flow fluctuations and related impacts in the lower Yuba River, the proposed project will help provide flexibility in implementing less certain management and restoration actions, and support and maximize the effectiveness of ongoing and future ecosystem restoration actions in the lower Yuba River, Feather River, Sacramento River, Delta, and Suisun and San Francisco Bays. The proposed flow bypass system will also contribute to long-term temperature benefits for "at-risk species" resulting from construction and operation of the proposed Narrow 2 intake extension. This intake extension will draw more water from the Englebright coldwater pool and is expected to reduce temperatures in the lower Yuba River by up to 6 F. Verbal agreements have been obtained for Proposition 204 funds for this project.

## 3. Requests for Next-Phase Funding

This proposal is not requesting next-phase funding for a project currently funded by CALFED or CVPIA.

## 4. Previous Recipients of CALFED or CVPIA Funding

YCWA is a cost-share partner with CALFED and CVPIA for the project "Life History and Stock Composition of Steelhead Trout in the Lower Yuba River" (CALFED Project 98-N03). Coordination (Task 1) is in progress. Final design drawings and trap construction were completed (Task 2). Trapping and data collection activities (Tasks 3-8) have not begun yet because of delays in receiving state and federal permits for collecting listed species under state and federal Endangered Species Acts, and authorization from the U.S. Army Corps of Engineers to conduct fish trapping at Daguerre Point Dam.

## 5. System-Wide Benefits

System-wide benefits were described in Section D2, "Relationship to Other Ecosystem Restoration Projects".

## E. QUALIFICATIONS

YCWA has taken an active role since 1990 in fisheries monitoring, protection, and enhancement on the lower Yuba River through the implementation of flow and water temperature control measures, funding of fisheries monitoring programs and assessments, and participation in fisheries enhancement planning efforts currently being undertaken by the Yuba River Fisheries Technical Working Group. YCWA has modified its flow and maintenance operations to benefit lower Yuba River fisheries resources. YCWA is currently a cost-share partner with CALFED and CVPIA for a study of the life history and stock composition of steelhead trout in the lower Yuba River, and is currently funding a U.C.Davis Master's thesis study of the life history and habitat requirements of juvenile steelhead in the lower Yuba River. In addition, YCWA has funded preliminary design studies for the Narrows 2 powerplant intake extension and Narrows 2 bypass studies. Verbal agreements have been obtained for Proposition 204 funds for the intake extension project.

	Table 1	Cost Estin	nate for Narr	ows 2 Flow I	Bypass Final [	Design	,	
			Subject to Overhead					
Personnel1	Direct Labor Hours	Salary	Benefits Rate	Travel	Supplies and Expendables	Service Contracts	Overhead Rate	Total Cost
Principal Engineer	780	\$53	0.55	\$1,000			1.18	\$125,24
Senior Engineer	910	\$46	0.55	\$1,0001	,		1.18	\$126,80
Engineer :	455	\$34	0.55	\$1,000	,		1.18	\$47,55
Totals	2145	í		\$3,0001	\$0	\$0		\$299,60

**Table 6-1 - Cost Estimate Summary** 

Item	Description	Unit	Quantity	Unit Price	Amount	Totals
1	Maintain River Flow	ls	1	\$12,000	\$12,000	
2	Construction Access:			i		- 1
	Cofferdam	ls	1	\$30,000	\$30,000	1
	Rock Bench Excavation	cy	500	\$109	\$54,500	Ď
	Retaining Wall Extension including Backfill	ls	1	\$19,000	\$19,000	
	Hauling and Disposal of Excavated Material	ls	1	\$10,000	\$10,000	
	Access Stairway	Is	1	\$22,000	\$22,000	
	Roads & Fences	ls	1	\$27,000	\$27,000	
3	Handling Hazardous Waste	ls	1	\$10,000	\$10,000	
4	Structural Excavation in Rock	cy	2110	\$64	\$135,000	
5	Excavated Slope Protection (Rock Bolts, Mesh, Shotcrete)	is	1	\$25,000	\$25,000	
6	Tunnel Excavation	cy	420	\$1,026	\$430,900	
7	Drilling Consolidation Grout Holes in Tunnel	If.	1280	\$45	\$57,600	
8	Consolidation Grouting in Tunnel	sks	640	\$30	\$19,200	
9	Steel Tunnel Liner	tons	34	\$13,750	\$467,500	
10	Pipe for Pressure Relief Drainage System	lbs	2800	\$1.30	\$3,600	
11	Concrete Tunnel Lining	cy	210	\$310	\$65,100	
12	Structural Concrete in Bypass Valve Structure	çy	940	\$550	\$517,000	
13	Steel in Hood Liner Including Stiffners & Anchors	tons	15.5	\$6,380	\$98,900	
14	Miscellaneous Metal	tons	2.0	\$6,500	\$13,000	
15	Access Bridge- 10 ft. wide	1f	40	\$1,100	\$44,000	
16	Furnish 78 in. Dia Fixed Cone Valve including operator, stem, and accessories FOB jobsite	ls	1	\$242,000	\$242,000	
17	Install 78 in. Dia Fixed Cone Valve including operator, stem, and accessories in valve structure	ls	1	\$30,000	\$30,000	
18	Furnish 168 in. Dia. Butterfly Valve including operator, and accessories FOB jobsite	ls	1	\$495,000	\$495,000	
19	Install 168 in. Dia. Butterfly Valve including operator and accessories in powerhouse	ls	1	\$65,000	\$65,000	
20	Remove & Relocate Misc. Mechanical/Electrical Equipment	ls	1	\$31,500	\$31,500	
21	Remove, Refurbish & Reinstall Dresser Coupling	ls	1	\$8,500	\$8,500	
- 22	Structural Modifications in Powerhouse	1s		\$55,000	\$55,000	
23	Furnish & Install Automated Control System: Conduit/Cable PC/PLC	ls is		1 \$25,200 1 \$17,400		
24	Furnish and Install Electrical Facilities including power supply and lighting	1s		\$9,000		
25	Furnish & Install Diesel Generator & Auxiliary Equip.	- Is	+	\$39,000	\$39,000	
26	Furnish & Install Acoustic Flow Meter	ls		1 \$33,000		
27	Startup & Testing	ls		\$25,500		
	Subtotal Subtotal	1 13	_		1,311,34	\$3,137,4
	Allowance for Contractor Mobilization	+-	5%			\$156,9
		-	1 374	+		\$3,294,3
	Total Construction Cost	-	200/	+		\$658,9
	Engineering and Administration	+ .	20%	P30.000		\$30,0
	Agency's Insurance	ls.	1%	\$30,000		\$100,0
	Agency's Legal & Admin. for Permits (a) Licenses	ls.	1%	\$100,000		
	Total				<del> </del>	\$4,083,7
	Contingencies TOTAL PROJECT COST		30%			\$1,225,0

## F. COST

## 1. Budget

This proposal requests funding to produce the final design for the Narrows 2 flow bypass. The final design will be based upon the already completed preliminary engineering design.

This project started on December 4, 1998 when YCWA requested MK Centennial to provide a preliminary cost estimate for a 3,000 cfs synchronous bypass for Narrows 2. MK Centennial was selected to complete the preliminary cost estimate because they now own the company that performed the original design and construction engineering work for Narrows 2 and they perform the ongoing engineering work on the Yuba River Development Project.

The preliminary cost estimate study was completed on November 5, 1999 and this study estimated the total cost to build the Narrows 2 bypass to be \$5,308,200, excluding lost hydro power. YCWA paid \$109,568.76 for the preliminary cost estimate study. The final engineering design will provide the information necessary to perform the necessary environmental work and obtain the permits for building the project. After the final design is completed, YCWA will seek sources of funding for environmental work, obtaining the necessary permits and construction of the project.

The final design work is estimated to cost \$299,606 (Table 1) and will take less than one year to complete once the authorization is obtained to start the work. MK Centennial will build upon their preliminary design work to produce the final design. The final design budget is based upon the work identified in the preliminary cost estimate shown in Figure 3.

The final design is estimated to require 2,145 labor hours at a rates from \$34 to \$53 per hour. Benefits are calculated at 55% of the hourly rate and covers employee benefits. Overhead is calculated at 118% of salary and travel, and includes office space, office equipment use phone, furniture, support staff, total cost includes a 10% fee on all costs. Travel expenses are estimated for site trips required for obtaining the necessary information to estimate the final design. The final design will include the design criteria, operation criteria, plans and bid specifications including the mechanical, electrical, structural, equipment, material, and installation specifications.

## 2. Cost-Sharing

While this proposal does not include a formal cost share there is considerable financial support by YCWA. This financial support includes \$109,568.76 for the preliminary engineering study, in addition to staff time to support and review the preliminary study, staff time for supporting and reviewing the final design work. Also, YCWA supports ongoing river flow and temperature monitoring that provides a historical data base of river conditions.

## G. LOCAL INVOLVEMENT

The Narrows 2 site is located in Yuba County and the County Planning Department is responsible for planning in this area. The plan has been shared with the Yuba County Community Development Director and members of the County Board of Supervisors. Both parties support the Narrows 2 bypass plan and did not express any concerns. Copies of notification letters to the Clerk of the Board of Supervisors and the Community Development Director are attached as Exhibits 1 and 2.

Even though this proposal is for final design and not for construction of the supplemental bypass system, verbal contact has been made with various members of the Lower Yuba River Technical Working Group including and other interested parties. These contacts included U.S. Fish and Wildlife, Fish and Game, PG&E, South Yuba River Citizens League, CALFED, Federal Energy Regulatory Commission, U.S. Army Corps of Engineers, University of California Extension, and Skippers Cove Marina, (voice message was left with the National Marine Fisheries Service). All contacted parties showed interest in finding out more about the concept and many parties were very supportive of the project.

A request for a formal presentation of the Narrows 2 bypass proposal to the Lower Yuba River Technical Working Group has been made. This group has representatives from U.S. Fish & Wildlife, Fish & Game, National Marine Fisheries Service, CALFED, Corps of Engineers, South Yuba River Citizens League, and Friends Of the River. The purpose of this presentation will be to seek formal endorsement of this group that provides a broad representation of groups interested in the Lower Yuba River fishery.

The Narrows 2 site location is very remote and has no public access. The identified surrounding property owners have been contacted, which includes the Corps of Engineers, University of California Extension and PG&E. They all exhibited interest in the concept and will he sent a copy of the design proposal. The Yuba County Assessor's Office will be contacted to determine if there are any other property owners adjacent to the Narrows 2 plant site that need to be contacted. Formal presentations on the project will be provided to any interested party. No third party impacts have been identified for this proposal for final design.

If CALFED funding is granted the YCWA will issue a press release to educate the public on the project and seek additional interested parties to share project information, identify and respond to any concerns.

## H. COMPLIANCE WITH STANDARD TERMS AND CONDITIONS

All applicable state and federal forms are provided in Section J, "Threshold Requirements".

#### I. LITERATURE CITED

- Bjomn, T.C., and D.W. Reiser. 1991. Habitat requirements of salmonids in streams. in W.R. Meehan, editor. Influences of forest and rangeland management on salmonid fishes and their habitat. American Fisheries Society Special Publication 19. Bethesda, Maryland.
- Brusven, M.A., and C. MacPhee. 1976. The effect of river fluctuations resulting from hydroelectric peaking on selected aquatic invertebrates and fish. Technical Completion Report A-035-IDA. Idaho Water Resources Research Institute, Moscow, Idaho.
- Cushman, R.M. 1985. Review of ecological effects of rapidly varying flows downstream from hydroelectric facilities. North American Journal of Fisheries Management 5:330-339.
- Fraser, J.C. 1972. Regulated discharge and the stream environment. in R.T. Oglesby, C.A. Carlson, and J.A. McCann, editors. River ecology and management. Academic Press. New York, New York.
- Hunter, M.A. 1992. Hydropower flow fluctuations and salmonids: A review of the biological effects, mechanical causes, and optiond for mitigation. Technical Report. State of Washington, Department of Fisheries, Olympia, Washington. September 1992.
- Nietzel, D.A., and C.D. Becker. 1985. Tolerance of eggs, embryos, and alevins of chinook salmon to temperature changes and reduced humidity in dewateredredds. Transactions of the American Fisheries Society 114:267-273.
- Reiser, D.W., and R.G. White. 1981. Effects of flow fluctuation and redd dewatering on salmonid ebryo development and fry quality. .Idaho Water and Energy Resources Research Institute, Research Technical Completion Report, Contract DE-AC79-79BP10848. Moscow, Idaho.
- United States Fish and Wildlife Service. 1997. Revised draft restoration plan for the Anadromous Fish Restoration Program: A plan to increase natural production of anadromous fish in the Central Valley. May 30, 1997.

## J. THRESHOLD REQUIREMENTS

This section contains the:

Letters of Notification Environmental Compliance Checklist Land Use Checklist State Forms

Nondiscrimination Compliance Statement

Federal Forms

Application for Federal Assistance (SF 424)

Budget Information - Non-Construction Programs (SF 424A)

Assurances - Non-Construction Programs (SF 424B)

U.S. Department of the Interior Certifications Regarding Debarment, Suspension and Other Responsibility Matters, Drug-Free Workplace Requirements and Lobbying (DI-2010)





1402 D STREET MARYSVILLE CALIFORNIA 95901-4226

15.EFHCNE 530.741.6278 FACSIMILE 530.741.6541 May 12,2000

Jim Manning
Yuba County Community Development
938 14th Street
Marysville, CA 95901

Dear Jim,

Yuba County Water Agency (YCWA) is applying for a CALFED grant to fund the final design of a full flow bypass for the YCWA Narrows 2 Powerhouse. The purpose of this letter is to comply with the CALFED requirement for local government notification. CALFED requires that a copy of the grant proposal be sent to the planning department responsible for land use for the location of the project. The grant is for a final design for a future project that will be located entirely within Yuba County next to the existing YCWA Narrows 2 Powerhouse.

Attached is a copy of the CALFED project proposal. Please contact me if you have any questions regarding the proposal.

Sincerely,

**Curt Aikens** 

Assistant Administrator

for Project Management

Cunt aibers





1402 D STREET **MARYSVILLE CALIFORNIA** 95901-4226

::PhOise 530.741.6278 6 WYLE 530.741.6541

May 12,2000

Terry Hansen Yuba County Clerk of the Board 215 5<sup>th</sup> Street Maysville, CA 95901

Dear Terry

Yuba County Water Agency (YCWA) is applying for a CALFED grant to fund the final design of a full flow bypass for the YCWA Narrows 2 Powerhouse. The purpose of this letter is to comply with the CALFED requirement for local government notification. CALFED requires that a copy of the grant proposal be sent to the Clerk of the Board of Supervisors of the county where the project is located. The grant is for a final design for a future project that will be located entirely within Yuba County next to the existing YCWA Narrows 2 Powerhouse.

Attached is a copy of the CALFED project proposal. Please contact me if you have any questions regarding the proposal.

Sincerely,

Curt Aikens Assistant Administrator

for Project Management

## **Environmental Compliance Checklist**

All applicants must fill out this Environmental Compliance Checklist. Applications must contain answers to the following questions to be responsive and to be considered for funding. *Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.* 

1.	<b>Do</b> any of the actions included in the proposal require compliance with either the California Environmental Quality Act (CEQA), the National Environmental Policy Act (NEPA), <b>or</b> hnth?				
	$\frac{X}{NO}$				
2.	If you answered yes to # 1, identify the lead governmental agency for CEQAINEPA compliance.				
	Lead Agency				
3.	If you answered <b>no</b> to # <b>1</b> , explain why CEQA/ NEPA compliance is not required for the actions in the proposal.				
	Proposed work involves preparation of final design plans and specifications only.				
4.	If CEQAINEPA compliance is required, describe how the project will comply with either or both of these laws. Describe where the project is in the compliance process and the expected date of completion.				
5.	Will the applicant require access across public <b>or</b> private property that the applicant does not own to accomplish the activities in the proposal?  YES  NO				

If yes, the applicant must attach written permission for access from the relevant property owner(s). Failure to include written permission for access may result in disqualification of the proposal during the review process. Research and monitoring field projects for which specific field locations have not been identified will be required to provide access needs and permission for access with 30 days of notification of approval.

	boxes that apply.	rovals may be required for the activities contained in your proposal. Check al
	LOCAL	
	Conditional use permit	<del></del>
	Variance	_
	Subdivision <b>Map</b> Act approval	
	Grading permit	_
	General plan amendment	
	Specific plan approval	_
	Rezone	—
	Williamson Act Contract cancellation	
	Other	_
	Other (pl ease specify)	
	None required	<u>x</u> _
	Trone required	<u></u>
	STATE	
	CESA Compliance	(CDFG)
	Streambed alteration permit	(CDFG)
	CWA § 401 certification	(RWQCB)
	Coastal development permit	(Coastal Commission/BCDC)
	Reclamation Board approval	_
	Notification	(DPC, BCDC)
	Other	
	(please specify)	
	None required	<u>X</u>
	<u>FEDERAL</u>	
	ESA Consultation	(USFWS)
	Rivers & Harbors Act permit	(ACOE)
	CWA § 404 permit	(ACOE)
	Other	
	(please specify)	
	None required	<u>X</u>
DE	PC =Delta Protection Commission	
	VA =Clean Water Act	ESA = Endangered Species Act
	ESA = California Endangered Species Act	CDFG = California Department of Fish and Game
	SFWS = U.S. Fish and Wildlife Service	RWQCB = Regional Water Quality Control Board
	COE = U.S. Army Corps of Engineers	BCDC= Bay Conservation and Development Comm.
`		• 1

## **Land Use Checklist**

All applicants must fill out this Land Use Checklist for their proposal. Applications must contain answers to the following questions to be responsive and to be considered for funding. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

۱.	or restrictions in land use (i. e. conservation easement <b>or</b> placement of land in a wildlife refuge)?						
	YES		NO				
2.	If <b>NO</b> to # 1, explain what type of a	ctions are involved in the	proposal (i.e., research only, planning only).				
	Final design plans and specifications	only.					
3.	If YES to # 1, what is the proposed	land use change <b>or</b> restric	tion under the proposal?				
4.	If <b>YES</b> to # 1, is the laud currently	under a Williamson Act c	ontract?				
	YES		NO				
5.	If YES to # 1, answer the following	::					
	Current land use Current zoning Current general plan designation						
6.	If YES to #1, is the land classified as Prime Farmland, Farmland of Statewide Importance or Unique Farmland on the Department of Conservation Important Farmland Maps?						
	YES	NO	DON'T KNOW				
7.	If YES to # 1, how many acres of l	and will be subject to phys	cical change <b>or</b> land use restrictions under the	e proposal?			
8.	If YES to # 1, is the property curre	ently being commercial I y	farmed <b>or</b> grazed?				
	YES		NO				
9.	If <b>YES</b> to <b>#8,</b> what are		employeesiacre  per of employees				

10. Will the applicant acquire any interest in land under the proposal (fee title or a conservation easement)?		
	YES	NO NO
11.	What entity/organization will hold the interest?	
12.	If YES to # 10, answer the following:	
	Total number of acres to be acquired under proposal Number of acres to be acquired in fee Number of acres to be subject to conservation easement	
13.	For all proposals involving physical changes to the land or restrictivill:	ion in land use, describe what entity or organization
	manage the property provide operations and maintenance services conduct monitoring	
14.	For land acquisitions (fee title or easements), will existing water rig	ghts also be acquired?
	YES	X NO
15.	Does the applicant propose any modifications to the water right or	r change in the delivery of the water?
	YES	X NO
16.	If YES to # 15, describe	

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STATE OF CALIFORNIA

## NONDISCRIMINATION COMPLIANCE STATEMENT

STD. 19 (REV. 3-95)

COMPANY W E

### YUBA COUNTY WATER AGENCY

The company named above (herinafter referred to as "prospective contractor") hereby certifies, unless specifically exempted, compliance with Government Code Section 12990(a-f) and California Code of Regulations, Title 2, Division 4, Chapter 5 in matters relating to reporting requirements and the development, implementation and maintenance of a Nondiscrimination Program. Prospective contractor agrees not to unlawfully discriminate, harass or allow harassment against any employee or applicant for employment because of sex, race, color, ancestry, religious creed, national origin, physical disability (including HTV and AIDS), medical condition (cancer), age (over 40), marital status, denial of family care leave and denial of pregnancy disability leave.

## **CERTIFICATION**

I, the official named below, hereby swear that I am duly authorized to legally bind the prospective contractor to the above described certification. I amfully aware that this certification, executed on the date and in the county below, is made under penalty of perjury under the laws of the State of California,

OFFICIAL'S NAME	
Nancy Jones	
DATE EXECUTED	EXECUTED IN THE COUNTY OF
May 10, 2000	Yuba
PROSPECTIVE CONTRACTOR'S SIGNATURE	
PROSPECTIVE CONTRACTOR'S TITLE	
Assistant Administrator	
PROSPECTIVE CONTRACTOR'S LEGAL BUSINESSNAME	
Yuba County Water Agency	

#### DEPARTMENT OF WATER RESOURCES

The Resources Agency	
Agreement No	

## STANDARD CLAUSES -CONTRACTS WITH PUBLIC ENTITIES

esting Classe. Contractor affirms that it is aware of the provinious of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-instrume in accordance with the provisions of that Code, and Contractor affirms that it will comply with such provisions before commencing the performance of the work under this contract.

Negative immedian Clause. During the performance of this contract, the recipient, Contractor and its subcontractors shall not deny the contract's bonefits to any person on the basis of mission, color, others group identification, sex, age, physical or mental disability, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religion, color, national origin, accentry, physical handicep, mental disability, medical condition, merital status, age (over 40), or sec. Contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination. Contractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code Section 12900 et seq.), the regulations promulgated therounder (California Administrative Code, Title 2, Sections 7285.0 et seq.), the provisions of Article 9.5, Chapter 1, Part 1, Division 3, Title 2 of the Government Code (Government Code Sections 11135 - 11139.5), and the regulations or standards adopted by the awarding State agency to implement such article. Contractor or recipient shall permit access by representatives of the Department of Fair Employment and Housing and the awarding Sate agency upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to such of its books, records, accounts, other sources of information and its facilities as said Department or Agency shall require to ascertain compliance with this clause. Recipient, Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective beguining or other agreement. The Contractor shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under the contract.

Availability of Funds. Work to be performed under this contract is subject to availability of funds through the State's normal budget process.

Audit Cleans. For contracts in excess of \$10,000, the contracting parties shall be subject to the contraction and sudit of the State Auditor for a period of three years after final payment under the contract. (Government Code Section 8546.7).

Payment Retention Chanse. Top percent of any progress payments that may be provided for under this contract shall be withheld per Public Contract Code Sections 10346 and 10379 pending satisfactory completion of all services under the contract.

Reinsburnement Clause. If applicable, travel and per diero expenses to be reinsburned under this contract shall be at the same rates the State provides for unrepresented employees 

Drug-Free Workplace Certification. By signing this contract, the Contractor or grantee bereby certifies under penalty of perjury under the laws of the State of California that the Contractor or grantee will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- 1. Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations.
- 2. Establish a Drug-Free Asserteness Program to inform employees about all of the following:
  - The dangers of drug abuse in the workplace, (a)
  - (b)
  - The person's or organization's policy of maintaining a drug-free workplace, Any available counseling, rehabilitation and employee assistance programs, and (c)
  - Penalties that may be imposed upon employees for drug abuse violations. (d)
- Every employee who works on the proposed contract or grant:
  - (a) Will receive a copy of the company's drug-free policy statement, and
  - (b) Will agree to abide by terms of the company's statement as a condition of employment on the contract or grant.

This contract or grant may be subject to suspension of payments or termination, or both, and the Contractor or grantee may be subject to debarment if the department determines that: (1) the Contractor or grantee has made a false contribution, or (2) the Contractor or grantee violates the certification by failing to carry out the requirements noted above.

Assertions With Disabilities Act. By signing this contract, Contractor assures the State that it complies with the Americans With Disabilities Act (ADA) of 1990, (42 U.S.C. 12101 et seq.), which prohibits discrimination on the basis of disability, as well as all applicable regulations and guidelines issued pursuant to the ADA.

Former State Employees: a) For the two-year period from the date he or she left State employment, no former State officer or employee may enter into a contract in which he or she orgaged in any of the negotiations, transactions, planning, arrangements or any part of the decision-making process relevant to the contract while employed in any capacity by any State agency. b) For the twelve-month period from the date he or she left State employment, no former State officer or employee may enter into a contract with any State agency if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to his or her leaving State service.

DWR 4100 (Rev. 9/95)

Service of the servic

Agreement No.:	 	
Exhibit:		

## **ADDITIONAL STANDARD CLAUSES**

Severability. If any provision of this Agreement is held invalid or unenforceable by any court of final jurisdiction, it is the intent of the patties that all other provisions of this Agreement be construed to remain fully valid, enforceable, and binding on the parties.

**Governing Law.** This Agreement is governed by and shall be interpreted in accordance with the laws of the State of California.

Y2K Language. The Contractor warrants and represents that the goods of services sold, leased, or licensed to the State of California, its agencies, or its political subdivisions, pursuant to thii Agreement are "Year 2000 compliant" For purposes of this Agreement. a good or service is Year 2000 compliant if it will continue to fully function before, at, and, after the Year 2000 without interruption and, if applicable, with full ability to accurately and unambiguously process, display, compare, calculate, manipulate, and otherwise utilize date information. This warranty and representation supersedes all warranty disclaimers and limitations and all limitations on liability provided by or through the Contractor.

Child Support Compliance Act. For any agreement in excess of \$100,000. the Contractor acknowledges in accordance therewith, that:

- The Contractor recognizes the importance of child and family support obligations and shall fully comply with ail applicable State and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with Section 5200) of Part 5 of Division 9 of the Family Code; and
- '2. The Contractor, to the best of its knowledge; is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

APPLICATION FOR		OMB Approval No. <b>0348-0043</b>					
FEDERAL ASSISTAL	NCF	2. DATE SUBMITTED		Applicant Identifier			
I EDENAL AGGIOTA	100	5/15/2000					
1. TYPE OF SUBMISSION: Application	Preapplication	3. DATE RECEIVED BY	STATE	slate Application Identifier			
Construction	Construction	4. DATE RECEIVED BY	FEDERAL AGENCY	Federal Identifier			
Non-Construction	Non-Construction			L			
5. APPLICANT INFORMATION			12				
Legal Name: Yuba County Water A	gonov.		Organizational Unit:				
Addres 402m city, county, State,			Name and talanhana	Name and telephone number of person to be contacted on matters involving			
D Street	and aprobe).		this application/give a				
Marysville. Ca 9590	1		Curt Aikens 5				
A EMPLOYER DENTIFICATION	N NUMBER (EN):		7. TYPE OF APPLICA	ANT: (enter appropriate letter in box)			
94 - 1 6 2 3	4 4 1		A State	H. Independent School Dist.			
8. TYPE OF APPLICATION			B. County	I. state Controlled Institution of Higher Learning			
	Continuation	Revision	C. Municipal D. Township	J. Private University K. Indian Tribe			
KRevision, enter appropriate lett	er(s) in box(es)		E.Interstate	L Individual			
Triction, ener appropriate les	(C) (II) (C)		F. Intermunicipal	M. Profit Organization			
A. Increase Award B. Dec	e Duration	G. Special District	N. Other (Specify)				
D. Decrease Duration Other	(specify):						
		9. NAME OF FEDER	RALAGENCY:				
·							
10. CATALOG OF FEDERAL	OMESTIC ASSISTANCE N	IUMBER:	11. DESCRIPTIVE T	ITLE OF APPLICANT'S PROJECT			
			l				
			Narrows 2 Hydro Plant Flow <b>Bypass</b> Final Design				
TITLE:			4				
12. AREAS AFFECTED BY PR	OJECT (Cities, Counties, Si	tates, etc.):	1				
Yuba County, Californi	ia						
13. PROPOSED PROJECT	14. CONGRESSIONAL D	STRICTS OF					
I NO POSED I NOSEO I	1	ifornia_					
Start Dale Ending Date	a. Applicant	поша_	b. Project				
	Yuba County Water	Agency					
15. ESTIMATED FUNDING		,	16. IS APPLICATIO	N SUBJECT TO R M E W BY STATE EXECUTIVE			
)			ORDER 12372 F	PROCESS?			
a. Federal	a	m	)				
				EAPPLICATION/APPLICATION WAS MADE			
b. Applicant a		00		LE TO THE STATE EXECUTIVE ORDER 12372			
		m	PROCES	SS FOR REVIEW ON:			
c. slate 5		411	DATE				
d Local	a	m	DATE				
u. cacai	. Local a m		b. No. PROGRAM IS NOT COVERED BY E. O. 12372				
e. Other a m		m	OR PROGRAM HAS NOT BEEN SELECTED BY STATE				
		FOR REVIEW					
f. Program Income a a m							
		17. IS THE APPLICANT DELINGUENT ON ANY FEDERAL DEBT?					
g TOTAL 5 299,606 m		ш	Yes If "Yes," attach an explanation.				
10 TO THE DECT OF MIV WAY	JWI EDGEAND BELIEF A	ALL DATA INITING ARRIVA	ICATIONIODE A DOLLO	ATION ARE TRUE AND CORRECT, THE			
				THE APPUCANT WILL COMPLY WITH THE			
ATTACHED ASSURANCES I			II.E.N. I COAITI AND	THE AT OUT THE TOWN IT IN ITEM			
a. <b>Type</b> Name of Authorized Re		b. Title		c. Telephone Number			
Curt Aikens		Assistant Admin					
d. Signature of Authorized Rep	resentative			e. Date Signed			
I Cont A	bere			5/15/2000			

**BUDGET INFORMATION- Non-Construction Programs** 

OMB Approval No. 0348-0044

		SECTION A - BUDGET SU	JMMARY		OMDITORISM NO. 1919 S
Grant Program Catalog <b>of</b> Fed Function Domestic Assist	eral Estimat	ed Unobligated Funds		get	
or Activity Number (a) (b)	Federal	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. FINAL DESIGN	\$	\$	\$	\$	299,606
2.					
3.					
41.					
f. Totals	\$	\$	\$	\$	299.606
		ECTION B - BUDGET CAT	EGORIES		
6. Object Class Categories	(4)		FUNCTION OR ACTIVITY	(4)	Total
a. Personnel	<b>(1)</b> 98,670	(2)  \$	(3)  \$	(4)  \$	\$ 98,670
b. Fringe Benefits	54,269				54,269
c. Travel	3.000				3,000
d. Equipment					
e. Supplies					
f. Contractual					
g. Construction					
<b>h.</b> Other			L		
i.Total Direct Charges (sum of 6a-	<b>6h)</b> 155,939				155.959
j. Indirect Charges	143.667				143.667
<b>k.</b> TOTALS ( <b>sum</b> of <b>6i</b> and <b>6j</b> )	\$	\$	\$	\$	\$ 299.606
7. Program Inwme	æ	-	s	l\$	<b> </b>

	NOTATION	SECTION C. NON-FEDERAL RESOURCES	SOURCES		
	SECTION	A Applicant	(c) State	(d) Other Sources	(e) TOTALS
(a) Grant Program		(a) Approarie	amo (a)	(1)	
88		89	\$	₩	49
.6					
10.					
11.					
12. TOTAL (sum of lines 8-11)		s	e	9	49
	SECTION	SECTION D - FORECASTED CASH NEEDS	SH NEEDS		
	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Querter
13. Federal	49	49	s	49	\$ 299,606
14. Non-Federal					-
of lines 1:	49	€	49	w	
SECTION E - BUL	SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT	FEDERAL FUNDS NEE	DED FOR BALANCE	FOR BALANCE OF THE PROJECT	
(a) Grant Program		(h) First	brooker (c)	(d) Third	(e) Fourth
			60	69	49
16.					
17.					
18.					
19.					
20. TOTAL (sum of lines 16-19)	,	s	\$	40	<del>69</del>
	SECTION	ION F - OTHER BUDGET INFORMATION	PORMATION		
21. Direct Charges:		22. Indirect Charges:	Charges:		
02 Damarke					

## **ASSURANCES - NON-CONSTRUCTION PROGRAMS**

Public reporting burden for **this** collection of information **is** estimated to average **15** minutes per **lesponse**, including time for reviewing instructions, searching existing data **sources**, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other **spect** of **this** collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC **20503**.

# PLEASE DO NOT RETURN YOUR COMPLETED FORM TO M E OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO M E ADDRESS PROVIDED BY M E SPONSORING AGENCY.

**NOTE:** Certain of these assurances may not be applicable to your project or program. If you have questiis, please contact the awarding agency. Further, certain Federalawarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
- 2. VMI give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- 3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or passoral gain.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 5. Will comply with the Intergovernmental PersonnelAct of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- 6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Ciil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation

- Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42) U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended. relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) \$523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 55290 dd-3 and 290 ee 3). as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (4.2U.S.C. \$53601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
- 7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies *Act* of 1970 (P.L. 91–646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federalfunds.

- Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract work Hours and safety standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
- 10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514: (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-

- Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- 13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
- **14.** Will comply with P.L. **93-348** regarding the protection of human subjects involved in research, development, and related activities supported by **this** award of assistance.
- 15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
- 16. VVII comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residencestructures.
- 17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 arid OMB Circular No. A-133, 'Audits of States, Local Governments. and Non-Profit Organizations.'
- **18.** Will comply *with* all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing *this program*.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	Intle			
Cent abers	Assistant Administrator			
APPLICANT ORGANIZATION	DATE SUBMITTED			
Yuba County Water Agency	5/15/2000			

## U.S. Department of the Interior

# Other Responsibility Matters, Drug-Free Workplace Requirements and Lobbving

Persons signing this form should refer to the regulations referenced below for complete instructions:

Certification Regarding Debarment. Suspension, and Other Responsibility Matters - Primary Covered Transactions - The prospective primary participant further agrees by submitting this proposal that it will include the clause tilled, Tertification Regarding Debarment, Suspension, Ineligibility and Voluntary Enclusion - Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions. See below for language to be used; use this form for certification and sgn; or use Department of the Incide Form 1954 (DI-1954). (See Appendix A of Subpart D of 43 CFR Part 12.)

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions - (See Aooendix 8 of Subpart D of 43 CFR Part 12.)

Cetiiication Regarding Drug-Free Workplace Requirements - Alemate I. (Grantees Other Than Individuals) and Alternate II. (Grantees Who are Individuals) - (See Appendix C of Subpart D of 43 CFR Part 12.)

Scrature on this form provides for compliance with certification requirements under 43 CFR Parts 12 and 18. The cetilications shall be treated as a material representation of fact upon which reliance will be placed when the Department of the Interior determines to award the covered transaction. grant, cooperative agreement or loan.

## PARTA Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

## CHECK X IF THIS CERTIFICATION IS FORA PRIMARY COVERED TRANSACTION AND IS APPLICABLE.

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
  - (a) Are not presently detained, suspended, proposed for debarment, declared ineligible. or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public fractal sale or local transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embeddment, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
  - (c) Are not presently indicated for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not with a three year period preceding this application/proposal had one or more public transactions (Federal. State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

# PART B: Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion - Lower Tier Covered Transactions

## CHECK \_\_ IF THIS CERTIFICATION IS FOR A LOWER TIER COVERED TRANSACTIONAND IS APPLICABLE

- (1) The prospective lower terparticipant certifies, by submission of this proposal, that neither it nor its principals is presently debarred. suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.
- (2) Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

DI-2010 March 1995 (This form consolidates DI-1953, DI-1954, DI-1955, DI-1856 and DI-1963)

#### PART C Certification Regarding Drug-Free Workplace Requirements

## IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS NOT AN INDIVIDUAL.

Alternate I. (Grantees Other Than Individuals)

- A. The grantee certifies that it will or continue to provide a drug-free workplace by:
  - Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use Of a control substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
  - Establishina an onaoina drua-free awareness program to inform employees about-

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The dangers of drug abuse in the workplace;
The grantee's policy of maintaining a drug-free workplace;

Any available drug counseling, rehabilitation, and employee assistance programs; and

- The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
- Making La requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
- Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employ ee will

Abide by the terms of the statement; and (1)

- (2) Notify the employer in writing of tis or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;
- Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee contents receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position the bevery grant officer on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant:
- Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted -

Taking appropriate personnel action against such an employee. up to and including termination. consistent with the

- requirements of the Rehabilitation Act of 1973, as amended; or Require such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;
- Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a), (b), (c), (d), (e) and (f).
- B. The grantee may reset in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance (Street address, city, county, state, zip code)

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			EY, C								_
Check	if there	are w	orkplaces	on	file	that	are	not	identified	here.	

#### **PARTD** CertificationRegarding Drug-Free Workplace Requirements

## CHECK IF THIS CERTIFICATION IS FOR AN APPLICANT WHO IS AN INDIVIDUAL

Alternate II. (Grantees Who Are individuals)

- The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant;
- If convicted of a criminal drug of fense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction in wing, within 10 calendar days of the conviction, to the grant officer or other designee, unless the Federal agency designates a control point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

(This form consolidates DI-1953, DI-1954. DI-1955. DI-1956 and DI-1883)

# PARTE: Certification Regarding Lobbying Certification for Contracts, Grants, Loans, and Cooperative Agreements

CHECK TIP CERTIFICATION IS FOR THE AWARD OF ANY OF THE FOLLOWING AND THE AMOUNT EXCEEDS \$100,000: A FEDERAL GRANTOR COOPERATIVE AGREEMENT, SUBCONTRACT, OR SUBGRANT UNDER THE GRANT OR COOPERATIVE AGREEMENT.

CHECK\_\_ IF CERTIFICATION IS FOR WE AWARD OF A FEDERAL LOAN EXCEEDING WE AMOUNT OF \$150,000, OR A SUBGRANT OR SUBCONTRACT EXCEEDING \$100,000, UNDER THE LOAN.

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an differ or employee of an agency, a Member of Congress, and officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal. amendment, or modification of any Federal contract, grant, loan. or cooperative agreement.
- (2) If the funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all test (round) subcortacts, subgarts, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify accordingly.

This confication is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Sumission of this certification is a preceduate for making orentering into this transaction imposed by Section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100.000 for each such failure.

As the authorized certifying official, I hereby certify that the above specified certifications are true.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

CURT AIKENS - ASSISTANT ADMINISTRATOR FOR PROJECT MANAGEMENT

DATE MAY 15, 2000

TYPED NAME AND TITLE

DI-2010

March 1985

(This form consolidates DI-1953, DI-1954,

DI-1955. DI-1856 and DI-1963)